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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/539,143

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EXAMINER

AUGHENBAUGH, WALTER

ART UNIT

PAPER NUMBER

1772

MAIL DATE

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06/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/539,143	Applicant(s) NAKAMURA ET AL.	
	Examiner Walter B. Aughenbaugh	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-25 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/16/06, 8/12/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 22-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 22-25 provide for the use of the multilayered structure, but, since the claims do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 22-25 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1772

4. Claims 10-17 and 20-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Flepp et al. (USPN 6,555,243).

In regard to claim 10, Flepp et al. teach a multilayer structure having excellent fuel barrier performance (col. 1, lines 1-27 and col. 7, lines 7-25) comprising at least two layers (e.g., two layers) of EVOH (at least one intermediate layer consisting of [EVOH]", col. 5, lines 37-50, EVOH is saponified ethylene-vinyl acetate copolymer) and a polyamide layer (col. 5, lines 37-50), where the polyamide layer comprises layered silicate filler (col. 7, lines 7-25) and where the content of the layered silicate filler (filler is uniformly dispersed in the resin that the filler fills) in the polyamide matrix is from 0.5 to 50 parts by weight per 100 parts by weight of the polyamide matrix (col. 7, lines 26-28 and 7-10), a range that overlaps with the claimed range of from 0.2 to 5 parts by weight per 100 parts by weight of the polyamide.

In regard to claim 11, Flepp et al. teach a multilayer structure having excellent fuel barrier performance (col. 1, lines 1-27 and col. 7, lines 7-25) comprising two polyamide layers (col. 5, lines 37-50) having interposed therebetween an EVOH layer (at least one intermediate layer consisting of [EVOH]", col. 5, lines 37-50, EVOH is saponified ethylene-vinyl acetate copolymer) where the polyamide layer comprises layered silicate filler (col. 7, lines 7-25) and where the content of the layered silicate filler (filler is uniformly dispersed in the resin that the filler fills) in the polyamide matrix is from 0.5 to 50 parts by weight per 100 parts by weight of the polyamide matrix (col. 7, lines 26-28 and 7-10), a range that overlaps with the claimed range of from 0.2 to 5 parts by weight per 100 parts by weight of the polyamide.

In regard to claims 12 and 13, Flepp et al. teach that the multilayer structure further comprises a polyolefin layer (adhesion-promoting layer, col. 5, lines 26-36, the adhesion-

Art Unit: 1772

promoting layer is a polyolefin layer because Flepp et al. teach that the adhesion-promoting layer comprises a polyamide and a compatibilizer, col. 5, lines 26-36, and that acid-modified ethylene/ α -olefin copolymers, which are polyolefins, are suitable as the compatibilizer of the adhesion-promoting layer, col. 6, lines 51-57 and 45-50).

In regard to claims 14 and 15, Flepp et al. teach that the polyolefin of the polyolefin layer (adhesion-promoting layer, col. 5, lines 26-36) is modified with an unsaturated carboxylic acid or a derivative thereof (col. 6, lines 51-57, 36-37, 40-43 and 44-50).

In regard to claims 16 and 17, Flepp et al. teach that the EVOH layer and the polyolefin layer (adhesion-promoting layer, col. 5, lines 26-36) are stacked through a polyolefin layer modified with an unsaturated carboxylic acid or a derivative thereof (adhesion-promoting layer, col. 5, lines 26-36, col. 6, lines 51-57, 36-37, 40-43 and 44-50).

In regard to claims 20 and 21, the thickness ranges taught by Flepp et al. at col. 8, lines 23-48, for a total multilayer composite thickness of 1mm, overlaps with the thickness ranges claimed in claims 20 and 21 (where layers "a" and "c" are polyamides layers, and layer "b" is an EVOH layer, col. 8, lines 23-48). Furthermore, the values taught by Flepp et al. at col. 10, lines 8-18, fall within the thickness ranges claimed in claims 20 and 21 (where layers "a" and "c" are polyamides layers, and layer "b" is an EVOH layer, col. 8, lines 23-48).

In regard to claims 22 and 23, Flepp et al. teach that the multilayer composite is a container (all containers are hollow) (col. 1, lines 1-13 and col. 5, lines 54-56).

In regard to claims 24 and 25, Flepp et al. teach that the multilayer composite is a fuel part (col. 1, lines 1-13 and col. 5, lines 54-56).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flepp et al. (USPN 6,555,243) in view of Deguchi et al. (USPN 5,248,720)

Flepp et al. discuss the structure as discussed above in regard to claims 10 and 11.

Flepp et al. fail to explicitly teach the particular dimensions of the silicate particles and the claimed minimum interlayer distance.

Deguchi et al., however, disclose a polyamide/layered silicate composite that has excellent resistance to gasoline permeation (col. 2, lines 47-56) and disclose the same one-side length (of the silicate) range and thickness (of the silicate) range claimed in claims 18 and 19 (col. 3, lines 32-34). Deguchi et al. also disclose the same minimum interlayer distance as that claimed in claims 18 and 19 (along with the condition where the silicate particles are dispersed uniformly, col. 3, lines 35-48). Therefore, one of ordinary skill in the art would have recognized

Art Unit: 1772

to have used silicate particles having the particular dimensions taught by Deguchi et al. and to have blended the silicate particles with the polyamide in the appropriate proportions such that the the minimum interlayer distance taught by Deguchi et al. is achieved since the particular dimensions taught by Deguchi et al. and the minimum interlayer distance taught by Deguchi et al. are well known parameters for a composite of polyamide and silicate particles having suitable excellent resistance to gasoline permeation as taught by Deguchi et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used silicate particles having the particular dimensions taught by Deguchi et al. and to have blended the silicate particles with the polyamide in the appropriate proportions such that the the minimum interlayer distance taught by Deguchi et al. is achieved since the particular dimensions taught by Deguchi et al. and the minimum interlayer distance taught by Deguchi et al. are well known parameters for a composite of polyamide and silicate particles having suitable excellent resistance to gasoline permeation as taught by Deguchi et al.

Conclusion

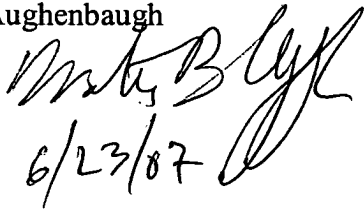
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B. Aughenbaugh whose telephone number is (571) 272-1488. While the examiner sets his work schedule under the Increased Flexitime Policy, he can normally be reached on Monday-Friday from 8:45am to 5:15pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1772

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Walter B. Aughenbaugh
6/23/07



6/23/07